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PLANT IN

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

OCT 4 1919

REPORT FOR WEEK ENDING OCTOBER 4, 1919.
(Except where otherwise indicated)

Amarillo:

The past week has been warm and dry and windy. We have made excellent progress with our harvesting. Everything is now harvested with the exception of the kafir and a few plats of late milo. A round of soil samples have been taken on milo and Rotation 570.

Maximum temperature for the week 85; minimum 45; average hourly wind velocity 10.4 miles; evaporation (4' tank) 1.758, (6' tank) 1.218; precipitation T.

Archer:

All of the corn except seven plats was cut on Friday. That night it snowed about five inches and froze pretty hard. The rest of the corn will be cut as soon as it gets dry enough to get in the field. The last round of soil samples was finished during the week and shows that the moisture has gone down into the third foot. Winter wheat is up and looking good.

Maximum temperature 77; minimum 26; precipitation .54 inch.

Big Spring:

Maximum temperature for the week 85; minimum 61; wind velocity 5.4 miles; precipitation .03 of an inch.

During the week we hauled in the plats of corn in the c.c. and rotation series. Also the plats of sorghum in the variety tests, c.c. and rotation plats. The continued wet weather we had the last half of September spoiled a great deal of the fodder in the sorghum plats and it had to be discarded for feed. On husking the corn we found that considerable of the grain had sprouted in the ear. The grain yields on some of the corn plats will be fair for the season, but can tell better what they will be after the ears get dry enough to shell and are weighed. We headed several acres of milo in the north field and it was hauled in, weighed and put in the barn. Several of the plats that will be planted in wheat this fall were double disked to kill the weeds that had started growing since the wet weather set in. The cotton is opening rapidly and we expect to make the first picking next week if the weather is favorable.

Colby:

The past week has been one of variable weather. The first couple of days were cool and cloudy with a fine mist constantly falling and were followed by several clear warm days while the last two days have been coll and cloudy with strong winds blowing.

Winter wheat seeded last Saturday is just beginning to come through and all other wheat is up with a good stand on all plats. Replanted milo is nearly ripe and the grain would not be injured to any extent by a frost. Feterita, however, is still in the milk stage.

The annual Farmer's Institute was held at Colby during the week with a stock show at the Experiment Station on the 3rd. The attendance was very small as most of the farmers are too busy threshing or seeding their winter wheat.

Colby, cont'd:

Dean F. D. Farrell, Professor L. E. Call and Dr. G. M. Potter of the Kansas State Agricultural College visited the Station on the 2nd.

Maximum temperature 86; minimum temperature 43; precipitation .10 inch.

Dalhart:

The work for the week has been mostly harvesting. Some repair work was done on one of the buildings this week. We have about two days binding yet then we will have all bound that it will be possible to bind. Some of the crops will have to be headed by hand in the field and the forage cut later. We have about half of the heading finished on the rotations but there is one large field that will have to be headed yet. The large field will be left until all the experimental plats are harvested. The corn will all have to be cut by hand. There is only two plats of corn that are mature at this time.

We got all our winter tye planted the first of the week. It is not coming up yet. The nights have been rather cool so germination will be somewhat delayed. We have plenty of moisture in the soil to bring the rye up and to last for some time.

Edgeley:

Maximum temperature 73; minimum 33; precipitation .57 inch.

The ground is still very dry for plowing. The half inch rain only wet down three inches. Considerable plowing has been done on the plots and another week will about finish it up. The weather has been ideal for fall work. Considerable fall plowing has been done by the farmers in this district. Quite an acreage of fall rye is being sown. The rye is being sown on summer fallow, disced, and fall plowed land.

First killing frost occurred on September 25, the thermometer registering 25 above zero. This is about fifteen days later than frost usually occurs in this district. Most of the corn that is suitable for growing under our climatic conditions matured fully.

Garden City:

The weather during the past week has been warm and dry. Most of the week has been taken up with seed selection and in cutting the remainder of the plots. The cowpeas, which were almost a total failure this year, are being threshed for seed purposes.

Maximum temperature for the week 94; minimum 46; average wind velocity (8' anumometer) 11.5 miles per hour, (2' anemometer) 9.2 miles per hour.

Huntley:

The first snow storm of the season occurred last Sunday, the precipitation amounting to .08 of an inch. Since then the mean temperature has been quite low, heavy frosts being frequent. Field work has consisted of miscellaneous jobs such as completing some late fall plowing, finishing the seeding of winter grains, and the discing of roads and cultivation of alleys on field H. in an effort to kill out volunteer winter wheat.

Maximum temperature for the week 75; minimum 27; precipitation .18".

Judith Basin:

Pleasant fall weather has generally prevailed during the past week. The first killing frost occurred on Sept. 27, when a minimum temperature of 27 degrees was recorded. This was sufficient to kill potato vines and potatoes will be dug in the near future.

Work at the station included seeding a number of plots with a furrow drill. Plots seeded at different rates with the furrow drill will be compared with plots seeded at different rates with an ordinary drill as to winter killing, soil blowing, and yields. The effect of straw mulching on winter killing is to be studied on other plots seeded with both the furrow and ordinary drills.

All fall seeding at the station is now completed and there is not a great deal more to do this fall as far as experimental work is concerned.

The installation of the electric light plant has been completed and Mr. Edgar departed for Huntley on September 30.

Mr. Ralph May, a graduate of the Kansas Agricultural College, arrived here on October 1 to take charge of the Cereal Investigations work at this station.

Maximum temperature for week 66; minimum 27; precipitation .14 inch.

Lawton:

We have had more wind during the last week than any other six day period for several months. Clear weather prevailed the first four days of the week but Friday and Saturday have been cloudy and threatening rain. A good rain is needed to bring on rapid and uniform germination of wheat.

So far we have made only the rate and date seeding but the main planting will be made within a week or ten days or as soon as possible after a good rain.

M.C.A. wheat plot was plowed and harrowed during the week. All of the cowpea plots were harvested and part of them weighed up. Disking of a field of oats stubble is also just about completed. Picking cotton and threshing of all sorghum plots will occupy our attention for the next few weeks. It seems impossible to secure additional help to complete the fall work advantageously so we will have to worry along as best we can with the present force.

Mandan:

Agronomy.

Husking corn in the rotations was completed during the week. The average yield was about 23.5 bu. per acre. The corn was not as good as last year and there was a larger percentage of small ears.

Corn varieties were also husked. The highest yield was obtained from Payne's White Dent.

Plowing with the tractor in the larger fields is being continued. The first frost of the season came last night.

Maximum 71 on 1st; minimum 28 on 3rd; precipitation .21".

Jordan, cont'd:

Cooperative Grazing Experiment.

The cattle did not make very heavy gains during the month of September. The 50 acre bunch just held their own. The feed in this pasture is getting very short.

The botanical studies are being continued as much as the cool weather will permit.

Arboriculture.

Mr. Henchel is now working in the Jordan district of central Montana and expects to be in Miles City the first of the week if weather permits. Mr. Bastine is working in the Choteau district of Western Montana and expects to be through in a few days.

Both men report snow last Sunday and Monday delaying them somewhat in finishing their inspections. They expect to be at the station sometime next week.

North Platte, report for two weeks ending October 4:

The average date for the first killing frost in the fall is four days past. The lowest temperature yet reached this season is 38 degrees on September 25. Corn is sufficiently ripe to escape injury except from a very severe freeze. A few rows husked out on the Experiment Station bench land without irrigation produced 46 bushels per acre. All corn in the vicinity is of very good quality.

Winter wheat was seeded on the plats September 24 and 25. The ground is becoming somewhat dry but a few plants are beginning to emerge and present indications are favorable for fair stands.

Sheridan:

The month of Septemoer was another with a mean temperature considerable above normal, it being plus 4.5 degrees. Every month since the beginning of this year has been equal to or above normal. Precipitation for the month amounted to 1.16 inches, most of it coming in showers that had no effect toward benefitting crop or soil conditions. Normally we should have had 12.58 inches of precipitation by October 1, but we have had but 5.88 inches. For just a year October 1, there has not been precipitation in any month equal to normal.

The first foot of soil on that portion of the soil that we work, on nearly all of the plats is as dry as it can get, consequently good plowing cannot be done. We have finished plowing all of the rotation plats that are to be fall plowed as well as all fall seeding on rotations. There is about 40 acres still to be fall plowed but we are waiting for enough rain to put the soil in a condition to do a good job because there are several bushels of small grain in yield on good and poor fall plowing.

It was surprising that we could plow the rotation land at all but close to half the plats plowed in excellent shape considering the dry condition of the soil and pulverized well but the other half of them plowed rather lumpy. It was noted that small grain plats plowed considerably better than corn plats but other than this one difference, there was little variation regardless of previous crop or previous methods of tillage.

Sheridan, cont'd:

Mr. O. E. Baker of the Office of Farm Management, visited the station on the 25th of September.

The past week has been somewhat cooler than previous weather with some precipitation and cloudy weather. The following data was collected. Mean Maximum 58, Maximum 79; Mean minimum 37, Minimum 33; Average wind velocity 3.7 miles; Precipitation .36 in. No killing frost has yet occurred but while frost has been noticeable on two mornings, with temperatures of 33, watermelons and tomatoes have not yet been touched by frost.

Tucumcari:

Field work has taken practically all of our time since the last report. On the 14th of September it began raining and during this and the two following days a total of 4.16" fell. This rainfall all came down slowly and there was very little run-off. Land to be put into wheat is in good shape for seed bed preparation work but the storm did considerable damage by wetting wheat stacks and in many places grain sorghums have lodged rather badly. A large percentage of our grain sorghums had been headed and thrown on the ground before the rain came and were damaged considerable. As soon as other urgent work would permit we repiled the heads so that they would dry out. All of our cowpea hay also went through the rain but it was spread out as soon as the rain stopped and it was damaged only slightly. About 9½ tons of cowpea hay has been stored in the barn loft and machine shed. The lowest plat yield of cowpea hay on the experimental plats was 90# and the highest 366#, with an average plat yield of 2.5#. Millet on Rotation 217 made a plat yield of 450#. The acre yields secured in the cooperative variety test of beans were as follows: Ancient yellow 425#; New Mexico Pinto 555#; Bayo 585#. California pink beans in the variety test were late in maturing and have not yet been threshed, the yield, however, will be very low as very few pods set on. The acre yields of pinto beans on Rotations 211 and 212 were 560# and 710# respectively. The pinto beans were of excellent color but many of the beans for some reason were not plump--a trouble which one hears considerable complaint of this year. Both silos have been filled and we have a little better than 20 tons of cane and kafir silage which ought to be of excellent quality. Plat yields of seeded broomcorn brush on the c.c. plats were as follows: Plat A 64#, B 58#, D 51#, E 52#, F 32#, and G 38#. Practically everything but cotton in the main plat field has now been harvested and in the shock. All of the milo plats were headed before the stalks were cut. With out a few exceptions the yields of milo and kafir in the main plat field will be low for the season. We are now busy harvesting the sorghums in the south field. A number of plats in this field will require 10 or 15 days of warm weather yet to reach maturity. During the last two or three weeks cotton has made little or no growth, however, there will be considerable cotton produced on some of the plats.

Cows and calves in the maintenance experiment are all in good shape to encounter any severe weather we may have during the fall and winter.

Weather since the heavy rain of last month has been warm with rather high wind movement during the last week.

Woodward:

Harvesting on the Cereal Project was completed during the week, or practically so, much time being spent there with the one man and team available. The cowpeas on the increase field which have been curing in the shock were hauled in and stacked. They cured nicely and were not visited by a single rain so that the feed is certainly of high standard. Milo and kafir shocks have falled badly during the last ten days due to the high wind and to natural settling conditions. These shocks were reset on the Cereal Project but on the Rotations they have not yet received attention. Variety cowpeas on the hundredth acre experiment plat were picked. Much head selecting among the milo and kafir increase fields for seed for next year has already been done at odd time. Some more selecting among the kafir fields will be done before these fields are cut as not enough seed of this sorghum variety has been secured.

High winds from a Southwesterly direction have characterized the weather for the past week. Rather high temperatures, also, apparently accompanying the wind. On Thursday the wind attained its highest velocity and some soil blowing occurred on a few of the roads about the station farm. A small rain on Friday night brought some relief from these conditions and gave hope to those who want to put out a wheat crop.

Mr. Chilcott was away from the station the major part of the week on a business mission to the Texas and New Mexico stations.

Maximum temperature for the week 92 on the 3rd; minimum 61 on the 4th; Precipitation .37 inches.

1
696

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

OCT 1 1 1919

REPORT FOR WEEK ENDING OCTOBER 11, 1919.

Amarillo:

The past week has been cool and cloudy. We had a small amount of rain on four different days, enough so that it kept us out of the field the greater part of three days. All crops are now harvested with the exception of a few late plats that probably will not be harvested until after frost. Seed has been selected for next years crops and a round of soil samples taken on CC Kafir. The temperature has gotten down to within three or four degrees of freezing two nights in succession but it has warmed up a little now and possibly frost will hold off for a few days yet.

Mr. Burnham, a new man in the office is here for a few days assisting with the work. Mr. Kaufman of the Cereal Office is here for a few days from Akron, Colorado.

Maximum temperature for the week 73; minimum 35; average hourly wind velocity 5.6 miles per hour; evaporation (4' tank) .817, (6' tank) .815; precipitation .46.

Big Spring:

Maximum temperature for the week 84; minimum 42; wind velocity 5.6 mi; precipitation 2.89.

We have had another week of cloudy wet weather. Sunday, Monday and Tuesday it rained most of the time and during these three days we got 2.05 inches. Wednesday and Thursday were cloudy most of the time but did not rain on these two days and we had hopes that we would have some clear weather for a few weeks. But our hopes were dispelled. Early Friday morning a hard wind came up from the north and rain with it. This wind was cold and was a regular wet norther. It showered all day Friday and most of the night. It is still cloudy this morning (Saturday) and it looks like we are in for more rain. On Sunday the 4th two hard hailstorms visited parts of the county. The heaviest one was 20 miles south and did great damage in the section visited. One farmer and ranchman lost 300 acres of cotton, quite a lot of his feed crops that had not been gathered, fifteen sheep and a number of calves from his registered herd. This storm was so severe that it tore large holes in the galvanized roof of his barn. The other hail storm was four miles north of the station and damaged and destroyed several fields of cotton. On account of the wet weather we did not get to do much field work this week.

Precipitation for the year to date: January .57, February .06, March 3.06, April 1.45, May 1.43, June 8.16, July .95, August 3.60, September 7.43, October 1 to 11 2.89, making a total for the season to date 29.60 inches. The highest rainfall recorded for any one year at Big Springs, beginning 1900 was 30.73 inches in 1905. During 1917, the rainfall for the year was 4.68 inches while in 1918, 12.35 inches was recorded. This year promises to equal or exceed the rainfall for 1905.

Dalhart:

At last report we were expecting to have our harvesting finished but this finds us very little ahead of last week. We have not been able to run the binder at all this week and most of the time we were unable to get in the field at all. It has been some rainy all week which kept the fields too wet.

Dalhart, cont'd:

The last two days it has been cold and cloudy but we were able to do some heading. We will head everything now that is in the field then start the binder on the forage. It would be an endless task to bind the crop with the heads on and try to head them after. Everything is down so that it will be hard enough to handle it after the heads are taken off. Today will finish all the heading on our rotations in the north field. The M. C. Plats in the south field will take but a short time to head. We have not harvested any of the corn yet but will get that as soon as the sorghums are headed. We will have to cut the corn by hand after jerking the ears. Two days with the binder will about clean up all the work. It is doubtful whether we will be able to run the binder before the middle of next week.

Last night we very near had a frost. Everything was white this morning but the temperature never dropped below 34. No damage was done. We are in hopes that we can finish the harvesting before we get a killing frost. We have been delayed two weeks on account of wet weather already.

Maximum temperature for the week 72; minimum 34; rainfall 1.82 inches. We had some sleet during the last rain.

Huntley:

Another wet snow storm has kept us out of the field the last few days of the week. The last of the bean varieties were pulled and piled ready for threshing though many of the beans were still green, the vines having been killed by frost putting an end to the hope that the crop might mature. Corn in the variety test was cut and husked and a start was made toward digging the potato varieties.

Maximum temperature for the week 76; minimum 14; precipitation .25".

Lawton:

Since the afternoon of October 4 we have had a total of 7.96 inches of rainfall. Nothing "dry" around here. Altho the percentage of run-off was excessively heavy the ground is thoroughly soaked up. Some of the fields are badly washed in places. Sunshine and wind are badly needed to dry out the sorghum crops that are in shock, also a lot of cowpeas that were about half cured before the rain.

Cotton will not suffer much loss as practically none of it was blown from the bolls to the ground. Some depreciation in value will result on account of the off color. With clear weather, field work may be possible some time next week.

Mandan:

Horticulture.

Strawberry seedlings from named varieties were transferred into flats in the greenhouse.

All potato variety tests, hill selections and spacing experiments have been dug.

Mandan, cont'd:

Juneberry, buffalo berry and cherry seedlings are being dug in the seed beds. They are then being transferred to heeling in grounds for spring planting.

Red and yellow buffalo berry, spriea and buckthorn seed were picked. Another lot of plum and miscellaneous seed was washed and is being dried for fall planting.

All hand crosses, mostly apples and plums, made here this spring in the greenhouse and in the open field at Edgeley, North Dakota, also a lot of seed from named varieties of plums, were planted during the week.

Agronomy.

Potatoes in the rotations were dug during the week. The yield was fair for the season.

Some fall plowing was done with the tractor on the larger fields.

Sorghum from the larger field was hauled in. It went about 1½ tons per acre.

A cold wave, with a little snow, struck here on the 9th. It is some warmer today.

Maximum temperature 82 on 8th; minimum 6 on 9th; precipitation Trace.

Cooperative Grazing Experiment.

Work on the botanical studies was continued on all good days. The cold weather is apt to cause a heavy shrinkage on the cattle for the October period.

Scottsbluff:

The week opened cool and showery. Three small showers totalled only .62 inches. Cooler weather developed toward the end of the week and several hard freezes occurred.

Harvesting of corn and storing potatoes took up the greater part of the week. With the exception of husking a few corn plats and counting the stands the work on the Dry Land Project is practically completed. Corn yields so far obtained have varied from a total failure up to 22 bushels per acre. Corn after small grain in most every instance was a total failure while that in the M.C. series and that on fallow or green manure made a fairly creditable yield considering the extremely dry season.

Sugar beet harvest throughout the valley is in full swing and good yields are reported. The labor situtation in this section is good and no trouble is had in getting men to do the work as was experienced during this season last year.

Maximum temperature for the week 70; minimum 19; precipitation .62 ".

Sheridan:

The past week has been somewhat cooler than other weeks this fall with several cloudy days, a snow storm and the first killing frost of the season.

The following weather data was recorded: Maximum 76, mean maximum 57; Minimum 8, mean minimum 26; average wind velocity 4.7 miles; precipitation .08 in the form of snow.

The precipitation we have had this month has wet the ground very little

Sheridan, cont'd:

and has not made fall plowing any easier than it has been previously this fall. The work of the week has been grading roads and making a few cuts and fills here and there through the field. The carpenter work on the ice-house is almost completed and the root house is finished. Our potato crop for this year was harvested this morning in about an hour. We dug nearly a half acre and obtained about 45 pounds of potatoes and they were not marketable. It was noted, however, that the potatoes obtained were about at the stage of growth that the first potatoes on the market usually are, that is the skin very thin so that it will peel off by a little pressure with the thumb. These potatoes have all set since about the first of September, there being a dormant period of about two months previous to that.

Winter wheat on rotations which has been in the ground two weeks has not come up yet. The August dates of seeding on the Cereal Field are up and have been for about a month but the stand is very poor. It appears to be going backward each day.

Tucumcari:

The weather during the greater part of the week has been cloudy and cold with rain on three days. As a result of the weather it has been possible to do but very little field work this week. Most of the grain sorghums were headed before the rain set in and it was necessary to repile all of the heads, much of this work was done for the second time. Milo, as a result of the heavy wettings it has received has been damaged considerably and the heads will all have to be threshed now in order to make the grain fit for horse feed. We have been planning on running most of the headed milo and kafir in the general fields through our special grinder for feed. Today, the 11th, the weather has cleared nicely and we have resumed the harvesting of sorghums in the south field. This work will be practically finished today with the exception of a few plats which will not be mature for 10 or 15 days yet and which, no doubt, will be caught by frost. Only a cloudy sky saved us from having a heavy frost last night. Sorghum crops throughout the county are being harvested as rapidly as an acute labor shortage will permit. Farmers are afraid of another wind storm which would blow the sorghums down so badly that harvesting would all have to be done by hand. Cattlemen are hoping that grass will have an opportunity to cure naturally before it is killed by forst.

Maximum temperature 74; minimum 39; wind velocity 5.0 miles; evaporation .967"; precipitation 1.48".

Woodward:

Harvesting for the season has been completed with the exception of a few late seeded plats of sorghum on the Cereal Project. About fourteen acres of kafir in increase fields was cut during the week and all but about four acres is in the shcok. Cotton varieties also were picked. Insect damage to cotton has been very severe. Crop bids fair to be good in weight yields for this country. Stand being poor, total cotton yields cannot be high. Some broom corn was bailed during the week, this work being cone when the weather was too foul for outside work.

Woodward; cont'd:

Station was visited during the week by Mr. J. R. Horton, a Department Entomologist with headquarters at Wichita, Kansas. He went over the orchard, vineyard and shrubbery plantings and gave unseful information about insect and disease control.

First cold spell occurred during the week though no frost has been reported. Temperature on Saturday was read at 32 (minimum).

Maximum temperature for the week 72 on the 5th; minimum 32 on the 11th; Precipitation 1.05 inches.

Hays:

The past week has been cool, cloudy and rainy. For the week there was a total rainfall of 1.64 inches.

Although the rainfall during the months of June, July and August was considerable below normal, and especially so during July and August, the September rainfall was 3.28 inches or about one inch above normal. The September rains put the ground in fine condition for seeding of winter wheat and everybody got busy seeding whether he had any ground prepared or not and seeding has continued rapidly throughout the country since the middle of September until the recent rains and damp weather following has stopped it but only temporarily. The rainy weather is now holding up a large crew on the Experiment Station as they were not only in the midst of wheat seeding but also had crews harvesting sorghum crops, alfalfa haying anso a silage crew at work.

On the night of the 9th occurred the first killing frost of the season and it was a heavy one. This was followed by another heavy frost the 10th.

All kafir and milo on the Dry Land Project was harvested September 25 and 26 in very good condition.

Spreading of commercial fertilizer on the new fertilizer experiments and seeding of winter wheat was commenced October 6 and finished the following day.

Eighty pounds of bran was made into poison mash and spread over the project today for the benefit of the grasshoppers which were hopping around awaiting for the newly seed winter wheat to appear above the ground.

Maximum temperature for the week 73; minimum 29; precipitation 1.64 inches.

676

WEEKLY STATION REPORTS

OF THE OFFICE OF

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BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

OCT 18 1919

OCT 18 1919

REPORT FOR WEEK ENDING OCTOBER 18, 1919.
(Except where otherwise indicated)

Amarillo:

The entire week since Tuesday noon has been spent in threshing small grains. The old engine at this station was worn out and the Cereal Office was very slow in providing a new one. A new Fordson was delivered Monday morning and we have been making very good use of it since Tuesday. Most of the week has been spent on the Cereal Office varieties but a good share of the winter wheat on the D. L. A. Plats has been threshed since Friday noon.

Our threshing crew has been composed of Mr. Ross the Superintendent, Mr. Coffman a Cereal Office man from Akron, Mr. Burnham, the station teamster and myself.

Maximum temperature for the week 76; minimum 35; average hourly wind velocity 6.1 miles per hour; precipitation .05.

Big Spring:

The fore part of the week was wet and cloudy. On the 15th we were able to get into the field and picked a few plats of cotton. Early the morning of the 16th it began to rain with a cold wind from the north and kept it up most of the day. Thursday afternoon the weather cleared and this morning (Saturday) is the first clear morning we have had for some time. Milo and kafir in the shock is sprouting badly and we would like to see it stay clear long enough to get them threshed. The second growth on the milo, kafir and sorghum plats runs from four to six feet in height and a number of the plats have headed out.

Yields of cotton secured to date from the plats picked, C.C. series: Plat A - 70 lbs. seed cotton, Plat B - 55 lbs. seed cotton, Plat D - 61 lbs. seed cotton, Plat E - 84 lbs. seed cotton, Plat F - 87 lbs. seed cotton, Plat G - 79 lbs. seed cotton and Plat H - 75 lbs. seed cotton.

The above yields are from the first picking and as we did not get half we expect that all the above plats will make at the rate of a bale to the acre this year. Cotton is now selling from 33 to 35 cents per pound.

Maximum temperature for the week 79; minimum 47; wind velocity 3.0 miles per hour; precipitation .90 of an inch.

Colby, report for two weeks ending October 18:

The past two weeks have been very cool with a large amount of foggy misty weather. With the exception of a heavy rain of .65 inch on the 9th, however, the precipitation has not been large enough to be of any benefit. Although the temperature fell down to 32 on the 7th, killing frosts were not received until the 10th, 11th and 12th when minimum temperatures of 25, 27 and 29 respectively were recorded.

Milo and kafir were practically ripe and were not injured to any extent by the frost, but feterita replanted June 25 was still very green and will not be worth threshing. Winter wheat and rye have made good growth and are in excellent shape to withstand the winter.

Field work has been hindered greatly by the wet weather. Feterita, kafir and milo were harvested, however, soil samples taken on the M.C.Milo series and husking of corn was commenced but wet weather has interfered

Colby, cont'd:

again with the latter operation.

Mr. O. J. Grace visited the station on the 13th.

Maximum temperature for the week 72; minimum 25; precipitation .82".

Dalhart:

More rain and delays were in our program for the week. We got a rain last Saturday night and all day Sunday which made the fields so wet that we could not run the binder all week. If we do not get another rain before Monday we will be able to begin cutting again. We worked in the field as much as possible this week while they were wet and managed to get all the heading finished on all the experimental plats. We still have the general field to head. I think two days with the binder will finish our binding. We shucked the corn and cut the stalks by hand. We have all the grain off the plats hauled into the stack yard ready for threshing. As soon as the grain dries out more we can commence our threshing.

We have had no frost yet but it has come very near it several times. It came so near it that the leaves on trees are beginning to turn, some of them are black. We are having good drying weather now but do not know how long it will last. We are all busy in the field and could use more if we could get them but men can not be found at wages we can pay. We may not finish our work before frost but if the weather permits we will get it done, especially the rush in harvesting.

Edgeley:

Maximum temperature 61; minimum 11; precipitation .20 inch.

The weather for the past week has been cold and disagreeable. Fall plowing on all the plots has been completed. The soil was in very poor physical condition for plowing on account of the dry condition of the ground. A portion of the corn has been hauled in from the plots. The fodder is well dried out and is excellent in quality. The last series of soil samples will be taken next week.

Huntley:

As all hands were required to assist in the potato harvest on other parts of the farm no work was done on the Dry Land Project during the week. Snow and rain during the last few days has made field work difficult and at times impossible. The precipitation has served to bring up more of the fall sown grains so that now most plats have a fairly good stand though it is somewhat uneven as to height.

Maximum temperature for the week 67; minimum 25; precipitation .47".

Garden City, report for two weeks ending October 18:

The weather during the past two weeks has been somewhat varied, cold weather and showers alternating with warm weather. During the week ending October 11 one and thirty eight hundredths inches of rain fell, .21 inches

Garden City, cont'd:

falling on the 6th and 1.17 inches on the 8th. We also had our first frosts of the season this week. The thermometer registered 30 degrees on the nights of the 10th and 11th. Very little damage was done because it did not get cold enough to hurt the fourth crop of alfalfa and most of the other crops had been harvested before the frost. On the night of the 13th we received a slight rainfall of .27 inches. Most of the time has been spent in filling the silo and in preparing the wheat plats for planting when the soil was dry enough to permit working on them.

Mr. O. J. Grace of Akron, Colorado paid us a visit on the 10th.

Maximum temperature 78; minimum 30; precipitation 1.68 inches; wind velocity (8' anemometer) 8.4 miles per hour, (2' anemometer) 6.7 miles per hour.

Mandan:

Agronomy.

No work has been done in connection with the rotations the past week except part of the grain for next year has been cleaned.

Sunflowers for the Office of Drug Investigations were cut the fore part of the week. The yield of seed will be light and it will be some time before they are ready to thresh.

Some snow fell during the week but not enough to furnish much moisture.

Maximum temperature 63 on the 13th; minimum 15 on the 15th; precipitation .12 (Rain and snow).

Cooperative Grazing Experiment.

The weather the past week has been too cold to do much in connection with the botanical studies. All photographs for the season were taken on the 16th and 17th.

The cattle are being weighed for the close of the grazing season. They have made very small gains for October. The 50 acre bunch show a marked loss as they are getting short of feed.

North Platte, report for two weeks ending October 18:

The first killing frost of the fall occurred on October 5 with a minimum temperature of 29 degrees. Three days later a minimum of 24 degrees was reached freezing ice $\frac{1}{2}$ inch thick and the soil an inch or more in depth. Cool, cloudy weather has prevailed during the month and 1.36 inches of rain has fallen to date. Winter grain is in excellent condition.

Potatoes on the D. L. A. plats were dug yesterday. The average yield was 108 bushels per acre. The maximum yield was 119 bushels per acre following summer tillage and the lowest yield 85 bushels following oats fall plowed. With this exception all plats yielded more than 100 bushels to the acre.

Sheridan:

With the exception of but one day of the past week it has been cloudy most of the time with precipitation on two days. The drouthy weather ex-

Sheridan, cont'd:

perienced this summer appears to have ended with September for we have had sufficient rain this month to wet the ground down from 4 to 6 inches and making fall plowing possible and there is still more precipitation in prospect. These rains will also help winter wheat although but little benefit is shown yet.

All August seedings of winter wheat are up as well as that of September 1 but its condition was very poor prior to the rain. September 15 and October seedings are not up yet. This applies to rotations as well as Cereal work and to winter rye as well as winter wheat.

Carpenter work on the ice house has been finished and it is ready for painting.

A plow has been going for three days during the past week and a very good job is being done as the plowing was not started until after it rained. About 5 acres of land has been prepared for winter wheat as an increase field.

The following data has been collected during the week: Maximum 64, mean maximum 55; Minimum 25, mean minimum 30; average wind velocity 3.3 miles; precipitation .53 inches.

Judith Basin:

Weather conditions have been somewhat variable during the week, sunshine alternating with snow or showers. Maximum temperature 60; minimum 17; precipitation .43 inches.

But little field work has been possible during the week and time was spent in cleaning out the gramery and doing odd jobs about the place. Cereal varieties were cleaned in the small fanning mill.

A good acreage of winter wheat has been sown in the Judith Basin this year, a large part of which has been merely "stubbled in". Farmers are generally optomistic and believe that the period of drought is over and that a series of good years will follow.

The possibility of irrigating the bench lands of the Judith Basin is attracting a good deal of attention at this time. Government experts are at work to determine the feasibility of such a plan.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

OCT 25 1919

REPORT FOR WEEK ENDING OCTOBER 25, 1919.
(Except where otherwise indicated.)

Amarillo:

The entire week up to the middle of Friday afternoon has been spent in threshing small grains. All of the small grains, on both the D.L.A. and Cereal Projects, are threshed, with the exception of the Cereal Nursery. The planting of winter wheat will be the next thing in order.

Maximum temperature for the week, 80; minimum, 41; average hourly wind velocity, 7.2 mi. per hour; precipitation, T. Precipitation for October to date, .49.

Mr. Burnham left for Lawton, Okla., on the 24th inst.

Big Springs:

Maximum temperature for the week, 83; minimum, 53; precipitation, .05"; wind velocity, 3.6 miles. The prevailing direction of the wind has been from the west and southwest most of the week, with the result that we have had more clear weather than usual. Farm operations are still suffering, however, from too much moisture. The soil in the plats is so thoroughly saturated with moisture, yet the top surface remains wet and sticky, that we have been unable to begin on the fall plowing. We succeeded in getting the C.C. and rotation plats of winter wheat planted the latter part of the week.

The plats of the variety grain sorghums, harvested on Sept. 8 and 9, did not dry out sufficiently to thresh this week. Much of the grain in the shock in these plats has sprouted, as was stated in the news letter of last week. Though it was wet and somewhat muddy in the fields, we succeeded in getting the cotton in the rotations and most of the variety plats picked this week. We still have several acres of feed to head in the north field, as well as a crop of sudan grass to harvest. We are hoping we will have two or three weeks of good weather so we can begin to catch up with the station work.

Garden City:

The weather this week has been very favorable for farm work, and the seeding of wheat and filling of silos have kept the farmers of this vicinity very busy.

The soil has dried out enough so that it could be worked up in good shape and it also contained enough moisture so that a very good seed-bed could be prepared for winter wheat. All of this week has been spent in preparing the plats and planting winter wheat and rye.

Maximum temperature, 75 degrees; minimum, 30 degrees; wind velocity, 8' anemometer, 8.6 mi. per hr.; 2' anemometer, 6.8 mi. per hr.

Hays, for the week ending 10/11:

The past week has been cool, cloudy, and rainy. For the week there was a total rainfall of 1.64 inches.

Hays, cont.:

Although the rainfall during the months of June, July, and August was considerably below normal, and especially so during July and August, the September precipitation was 3.28", or about 1" above normal. The September rains put the ground in fine condition for seeding winter wheat and everybody got busy seeding whether he had any ground prepared or not, and seeding has continued rapidly throughout the country since the middle of September until the recent rains and damp weather following which has stopped it, but only temporarily. The rainy weather is now holding up a large crew on the Station, as they were only in the midst of wheat seeding. We also had crews harvesting sorghum crops, alfalfa haying, and also a silage crew at work.

On the night of the 9th the first killing frost occurred, and it was a heavy one. This was followed by another heavy one on the 10th.

All kafir and milo on the Dry Land project was harvested September 25 and 26 in very good condition. Spreading of commercial fertilizer experiments and seeding of winter wheat was commenced Oct. 6 and finished the following day. Eighty pounds of bran was made into poison mash and spread over the project today for the benefit of grasshoppers which were hopping around waiting for the newly seeded winter wheat to appear above the ground.

Maximum temperature, 73; minimum, 29; precipitation, 1.64".

Huntley:

Weather during the week has been unusually cold and stormy for this time of year. Rain occurred the first two days of the week, and during the last few days considerable snow has fallen. An abrupt drop in temperature accompanied the last storm; the temperature reaching degrees below zero on the 24th and 25th.

Temperatures for the week: Minimum, -8 (twice); Maximum, 59. Precipitation, .91".

Judith Basin, week ending Oct. 12:

Cool cloudy weather has prevailed during the past week, and snow has twice covered the ground. Maximum temperature for the week, 65; minimum, 12; precipitation, .10 inch.

Potatoes were dug on October 6 and very poor yields were recorded. The best yielding variety was Six Weeks, one row of which yielded at the rate of 62.7 bu. to the acre. Green Mountain, which is ordinarily our best variety, resulted in a failure this year.

Some corn varieties were harvested on October 8, but mature ears of good size were very few in number in the case of all varieties tested. The best mature ears were obtained from Northwestern Dent.

Winter wheat sown on the rotations on September 23 is now up, and it appears that good stands have been secured.

Judith Basin, week ending Oct. 25.:

Cold stormy weather has prevailed during the past week, making it impossible to do a great deal of field work. A minimum temperature of 9 degrees below zero was recorded on the night of October 4, which is the

Judith Basin, cont.:

the lowest minimum temperature ever recorded for October at this Station. Maximum temperature for the week, 58; minimum, -); precipitation, .60".

When the snow that has fallen during the past week melts, the soil will be amply supplied with moisture and farmers are considerably encouraged by this fact. Warm growing weather would be desirable at this time as winter wheat is just up and not in a very good condition to pass the winter. In fact, a good deal of winter wheat has just been seeded, and recent weather has been too cold for germination to take place. Seeding was generally rather late this year on account of the extremely dry condition of the soil in early fall. As a consequence there is more danger of winter killing this year than usual unless we get several weeks of good growing weather in the latter part of October and the first of November. It is reported that an unusually large acreage of winter wheat has been sown in the Judith Basin.

Lawton: -(for the 2 weeks ending October 26.)

Damp, cloudy, foggy weather with occasional showers and heavy rains have continued during the past two weeks. The heaviest rainfall for the two weeks occurred on the 26th and amounted to 2.78". Some rain is falling today (27th). The total amount of precipitation to date for the month of October equals 11.08".

On October 20 we succeeded in seeding all wheat in Field A but three plots. All plots in Field B and the remaining three in Field A were too wet to permit any work at all. During the last two weeks we also threshed 20 plots of kafir. The grain is very damp and the fodder was about half rotten, but it seemed useless to wait until the fodder was dry enough to give satisfactory total weights. The grain of all sorghums is growing in the shock to such an extent that much of it is spoiled and the yields will be somewhat reduced. Where the shocks stand up well and the heads are closely packed the damage to the grain is worst. Radical changes in the weather will have to occur if any field work is accomplished for another week.

As yet we have had no frost. The minimum temperature recorded to date is 43, while the maximum temperature has been ranging from 50 to 84. The total precipitation since January 1 amounts to 37.76 inches. The cotton crop in this part of the state is suffering severe damage from the excessive rains which have fallen during October.

Sheridan:

Cool cloudy weather has prevailed the past week with snow falling on five days and rain on one day, with a total precipitation of .39. So far this month we have received 1.72 inches of precipitation which has soaked into the soil and made fall plowing very good. The ground is frozen slightly now and covered with snow so plowing was discontinued until better conditions exist.

Sheridan, continued:

Very few farms, so far as I have been able to see, have taken advantage of the wet weather for fall plowing, and it is getting rather late for them to get much done. The acreage of winter wheat seeded in this section will be a little less than normally, the principal reason being that good seed was not obtainable. The dry fall also caused many to decide that the seed was as well in the granery as in the soil. Apparently there is no question that the bulk of spring planted small grain will be put in on poor seed beds as there is so little summer tillage or fall plowing done. However, if we get a warm November, as we often do, conditions will be remedied by fall plowing.

A great deal of oil cake, cotton seed cake, and alfalmo are being shipped into this section as concentrates. The big cattle outfits are shipping in many carloads of it, and especially those who have some roughage, such as straw available for feed.

The following weather data was collected during the past week: Maximum temperature, 52; mean maximum, 37; minimum, 9; mean minimum, 23; average wind velocity, 4.4 mi. per hr.; precipitation, .39".

Tucumcari, for the 2 weeks ending Oct. 25:

The main work done during the past two weeks has been the heading of grain sorghums and threshing. Most of the stuff in the main plat field has now been threshed. We have had no rain since the week ending October 11, and all of the sorghums that have been headed for sometime are in good condition to thresh. A portion of the sorghums have been threshed.

The calves in the range cattle experiment were vaccinated for blackleg. Individual weights were also taken to determine the gains made by calves of each lot during the season to time of weaning.

November 14 has been selected as the date of our Annual Station Field Day Meeting. A stock juding contest, and athletic meet will be the principal attractions. The program is being worked up cooperatively by our County Agricultural Agent, The County Board of Education, and the Station.

Judging from present indications we will probably have no frost until November. We have had some hard winds during the past week.

Woodward - week ending Oct. 18:

Broomcorn bailing held attention during the week. The crop when weighed proved to be good as compared with other years. About a ton of brush was harvested on the Station this year, which has been sold to a local dealer. The first picking of cotton on the rotations was also made. Highest yield first picking was at the rate of 150 lbs. of seed and lint per acre. Other work has consisted of odds and end tasks about the farm.

Maximum for the week, 76 on the 16th; minimum, 33 on the 12th; precipitation, .35 inches.

Woodward:

During the past week all the fall seeding has been done. This includes not only the rotation wheat and rye plats, but also the road ways, the vineyard, and the orchard. The latter are seeded to prevent blowing during the winter months. Variety plantings of wheat were also made at this station this fall, these being under the care of the Cereal Office Representative here. Threshing of kafirs and milos was started this week, several plats from the Cereal Project having been run through. Thresning remains our only heavy work to be attended to this fall.

Maximum temperature for the week, 78 on the 20th, 23d, and 24th; minimum, 36 on the 25th. Precipitation, none.